

REMARKS

This paper is accompanied by a request for continued examination (RCE), and is being presented pursuant to 37 CFR § 1.114. This paper also is being presented as a supplement to the applicants' June 15, 2009, response to the final official action dated March 19, 2009. This paper and the accompanying RCE are timely filed as they are accompanied by a petition under 37 CFR § 1.136(a) for an extension of time to file in the second month, and payment of the required extension fee. The applicants respectfully request reconsideration and withdrawal of the outstanding rejections.

Claims 1-3, 7, 10, and 11 are pending and remain rejected under 35 USC § 103(a) as being obvious over International Publication No. WO 00/61200 (Patel) in view of U.S. Patent No. 5,441,561 (Chujo et al.). The applicants presented a complete reply to the rejection in their June 15 paper. In response, the Patent Office issued an advisory action on June 25, 2009, maintaining the rejection.

The advisory action cites the alcohol in lines 1 to 2 on page 16 of the primary prior art—Patel—as an additive for aqueous ink compositions. But that is simply one example of an additive added in an amount of only a few percent in polymers which are adopted as a volume extender in the ink. These polymers are used as a carrier for the indicator or the activator, and are selected depending on the printing/coating equipment to be used, as described in the first paragraph on page 15 of Patel. Thus, the applicants respectfully submit that the selection of these polymers is never related to the discoloration speed of the indicator. If the polyhydric alcohol of Chujo were added to the organic metal complexes of Patel, it is only indicated that preferable properties with respect to the printing/coating equipment may be achieved. Accordingly, the applicants respectfully submit that there is no motivation to add the polyhydric alcohol of Chujo to the aqueous ink composition of Patel in order to increase the discoloration speed of the indicator.

Further, Patel discloses alcohol as an activator; but, the alcohol of Patel cannot correspond to the polyvalent alcohol (C) of the present invention because it corresponds to the organic metal compound (B) of the present invention. Therefore, although Chujo is not grounds for an anticipation rejection, the present invention is not rendered obvious over a combination of the organic metal complexes of Patel with the polyhydric alcohol of Chujo, as long as Chujo does not disclose a plasma-sterilization indicator (and the Patent Office already has acknowledged that Chujo does not disclose a plasma-sterilization indicator).

The advisory action recognizes that Chujo discloses alcohol to control viscosity in an aqueous ink composition. The applicants respectfully submit that it is well known that such alcohols are used in inkjet ink as is described in lines 28 to 33 in the first column of Chujo. In

aqueous inks other than inkjet inks as well, using alcohol is a means that is often adopted to control viscosity of the ink. However, as discussed above, there is no motivation to include the polyhydric alcohol of Chujo in the aqueous ink composition of Patel.

The applicants respectfully submit that a person having ordinary skill in the art would not add the polyhydric alcohol of Chujo to the aqueous ink composition of Patel in order to increase the discoloration speed of the indicator because Patel discloses that the rate of color change increases with increasing of the concentration of the activator. See the Patel publication at page 14 (lines 29 to 33). Therefore, although the alcohol of Chujo may be well known, the applicants respectfully submit that the ordinarily skilled artisan would not be motivated to add it to the aqueous ink composition of Patel, as long as it is not shown in Chujo that the purpose or advantage of Chujo is to increase the discoloration speed of the indicator. Thus, the present invention is not obvious over Patel in view of Chujo.

Regarding the evaluation of differences in discoloration speed of the indicator shown in the results in Examples 1 and 2 (this would seem to be an error, which should correctly read Examples 22 and 23) compared with those in Comparative Examples 1 and 2, the Patent Office apparently takes the position that no unexpected results are shown. As discussed above, using alcohol is a means that is often adopted to control the viscosity of aqueous ink, and this is also the case in the use of alcohol in the aqueous ink composition of Patel. Accordingly, a content of the alcohol, if used in the aqueous ink composition of Patel as pointed out in the action, would be only a few percent with respect to the polymer which is used as a volume extender (carrier) in the ink of Patel.

The distinguished unexpected results in the discoloration speed of the indicator of the present invention are explicitly shown in the evaluation in Comparative Example 1 in contrast to the results of the Examples of the present application. The Patent Office takes the position that only the results of adding the polyvalent alcohol to the ink composition are shown, and requires that unexpected results in comparing polyvalent alcohols to other known solvent alcohols be shown. This request seems to be based on the position that solvents for controlling viscosity of the aqueous ink composition of Chujo and the polyvalent alcohol (C) in the present invention are regarded as the same. If such a position were to be taken, the evaluation results above would be understood to be capable of being regarded as comparative results in contrast to a known solvent, because the polyethylene glycol plus ethanol in the Examples of the present application are known solvents, and the ethanol in the Comparative Examples is also a known solvent. Further, it is important that the results of only adding the polyvalent alcohol to the ink composition, which are recognized by the Patent Office as being shown, are unexpected results themselves.

Thus, the applicants respectfully submit that one skilled in the art would not be motivated to combine these references to arrive at the present invention because the problems to be solved are quite different in the two references and they contain neither teaching nor suggestion that might motivate achievement of the present invention.

CONCLUSION

In view of the foregoing, the applicants respectfully traverse the § 103(a) rejections, and respectfully submit that the claimed invention is patentable under all the criteria relevant to a determination of unobviousness. The applicants, therefore, request reconsideration and withdrawal of the rejections, and allowance of all pending claims.

Should the examiner wish to discuss the foregoing, or any matter of form or procedure in an effort to advance this application to allowance, the examiner is urged to contact the undersigned attorney.

Respectfully submitted,

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